

Richmond Natatorium Restoration
Summary of facts and figures
August 14, 2010

General Plunge Facts:

- The Richmond Plunge was originally called the Richmond Natatorium or “The Nat”. It was built and opened for public swimming in 1926. The Plunge operated continuously up until it was closed in August 2001 due to structural failure of its exterior walls.
- The beautiful original roof clerestory monitor was removed from the building in the late 1950’s. This huge clerestory had 60 operable windows and 360 panes of glass and was a critical component of the original natatoriums design providing essential natural illumination and ventilation. It is not known why the monitor was removed. The monitor has been rebuilt to its original design as a part of the current restoration.
- The other significant alteration of the original design occurred in the 1970s when the beautiful tile surrounding the pool and on the pool deck was sandblasted in preparation for a fiberglass coating which was applied. This fiberglass coating was removed for the restoration and tile work, although not original, was brought back to the pool edge in a color scheme that borrowed from the original.
- The restored Plunge has reclaimed its original number of windows. We again have over 200 operable windows with 1,800 separate pieces of window glazing. The upper clerestory windows are operated by motorized controllers to allow for constant fresh air
- Pool tank is 60’x160’, for a total surface area of 9,600 square feet and contains 320,000 gallons of water
- The project is designed for a 50 year life span. Every choice was made for practicality, beauty and longevity. The sheetrock used is waterproof and impact resistant; the paint is of the highest quality. All the existing layers of paint were completely removed to provide an ultra stable substrate. The tile work is at a level of quality absolutely unheard of in commercial work.
- The mushroom fountain had to be taken out of the pool per health code requirements. We have repurposed the fountain to be a non-recirculating fountain activated by kids with a drinking fountain like handle. The water will come out of the top and drain to an adjacent wetland so no water is wasted. The fountain will be restored with tiles to match the original and then adorned with sea creatures made by our mosaic artist.
- The front stairs were pulled forward 5 feet and the site graded up at the west side to allow for a sidewalk to come and meet the top of the stair. This allowed us to eliminate the existing concrete ramp and to restore the front to its original design with a single center door and flanking window.
- The dressing rooms were pulled out of their original location under the balconies in order to be able to do the project in phases and to create a larger pool deck. The dressing rooms were placed in the north wing in rooms that were getting minimal use.
- The pool is fully accessible with accessible bathrooms and showers. There are a total of 9 semi private showers for each sex and ample lavatories, toilets and urinals for the large number of swimmers we will accommodate.

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Energy conservation methods; reduce our electrical and gas load over a conventional municipal pool by about 50%:

- High performance soy-based foam insulation in walls and ceilings.
- LED high-bay lights in the Natatorium. 75% less energy than metal halide hi-bays they replaced.
- Pool pump motor controller which optimizes the motor speed as the filters get loaded up.
- 95% efficient pool heaters
- 90% efficient heaters for our showers and sinks
- We use a combination of high efficiency radiant heating technologies which heat the bodies in the space and not the air itself as do conventional systems. This is important when you have a lot of fresh air introduced into the space as we have at the Plunge. In the natatorium itself are 10 infrared gas powered radiant heaters hanging above your head. In the dressing rooms, bathrooms and shower areas, we have hot water radiators.
- Programmable energy management system which turns fans and lights on and off automatically.
- We use natural ventilation through our 200 operable windows to exhaust our indoor humidity rather than a mechanical electric dehumidification system. This alone will save us 100k in energy bills per year and creates a noticeably healthier interior air quality.

Solar energy production; generates about half of our energy needs:

- 32 Kilowatt solar electric system on top of the re-built clerestory monitor
- 3,600 square feet of solar hot water panels on the southeast facing main roof.

The combination of conservation and production lead to about 60-70% reduction in energy costs, saving somewhere in the neighborhood of \$200,000-300,000 per year at today's energy costs.

Other green and healthy strategies and systems:

- Low water native plant landscaping
- Wetland to capture water from play fountain
- We have a ultra low flow shower head that feels like a normal shower
- We have high velocity hand dryers to save on paper.
- An ultra violet disinfectant system eliminates chloramines from the pool water. The Chloramines cause the bad "chlorine smell" and stings the eyes. The new Plunge pool water will feel and smell like fresh untreated perfectly clear water.
- Our pool uses a saline chlorination system which generates the required residual chlorine in the pool water by changing a salt molecule to a chlorine molecule using electrically charged titanium plates. Using this system saves money on chemical deliveries and allows us to avoid storing large amounts of toxic chlorine in the basement. The salt system is also reportedly softer on your skin. The salt in the pool matches the salinity in your tear drops so it does not sting your eyes.
- Our countertops and shower partitions are made from crushed recycled glass.

8 extraordinary local artists, craftspeople and their crews made a significant contribution to the project:

- John Wherle our famous muralist whose work truly stands out
- Arlin Robbins our mosaic tile magician who created our mosaic star fish and the extraordinary seahorses, mermaid and King Neptune pieces
- Sean Guttierrez and his crew from Artizen Tile our masterful tile artisans who installed the extraordinary tile work in the showers and bath and the mushroom fountain tile restoration.
- Sean Wentworth and his crew from Architectural Metal Works who made our wonderful fences and gates, our beautiful bronze work and custom hooks and bathroom stall hardware

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- Karl Kriedel and his crew at Bridewell window who made our extraordinary windows and doors
- Kamala Bennett and Geoff Hall of Sentient Landscape who created a kingdom of plants that will enchant us as they fill up the site with flowers and gentle native bees
- David Anson and his crew at Stonelight Tile hand made the fantastic artisan clay tiles for our mushroom fountain restoration using methods they have used continuously since the 1920s when the original tiles were created.
- Brian Elder who designed and lettered our beautiful hand painted signs